

What is Claimed is:

1. An additive formulation comprising:
  - (a) degradative glucanase enzyme specific for heparin; and
  - (b) a stabilizer.
2. The additive formulation of Claim 1, wherein said degradative glucanase enzyme specific for heparin is heparinase.
3. The additive formulation of Claim 1, wherein said stabilizer is trehalose, mannitol, mannose, or ammonium sulfate.
4. The additive formulation of Claim 3, wherein said stabilizer is trehalose.
5. The additive formulation of Claim 1, further comprising a buffer.
6. The additive formulation of Claim 5, wherein said buffer is sodium, phosphate, sodium chloride or TRIS.
7. The additive formulation of Claim 6, wherein said buffer is sodium phosphate.
8. The additive formulation of Claim 1, wherein said degradative glucanase enzyme specific for heparin is present in an amount at about 50 IU/mL to about 80 IU/mL
9. The additive formulation of Claim 8, wherein said degradative glucanase enzyme specific for heparin is present in an amount at about 65 IU/mL
10. The additive formulation of Claim 1, wherein said stabilizer is present in an amount at about 8 weight percent to about 12 weight percent.
11. The additive formulation of Claim 10, wherein said stabilizer is present in an amount of about 10 weight percent.

12. The additive formulation of Claim 5, wherein said buffer is present in an amount of about 15 mL of a 150mM solution.

13. An additive formulation comprising:

- (a) from about 50 IU/mL to about 80 IU/mL of a degradative gluconase enzyme for heparin;
- (b) from about 8 weight percent to about 12 weight percent of a stabilizer; and
- (c) about 15mL of a 150 millimolar (mM) buffer.

14. The additive formulation of Claim 13, wherein said degradative glucanase enzyme specific for heparin is heparinase.

15. The additive formulation of Claim 13, wherein said stabilizer is trehalose, mannitol, mannose or ammonium sulfate.

16. The additive formulation of Claim 15, wherein said stabilizer is trehalose.

17. The additive formulation of Claim 13, wherein said buffer is TRIS, sodium phosphate or sodium chloride.

18. The additive formulation of Claim 17, wherein said buffer is sodium phosphate.

19. A method for eliminating the physiological effects of heparin on a blood components in a mixture of blood components and heparin in a blood collection tube comprising the following steps:

- (a) preparing an additive formulation comprising a degradative glucanase enzyme specific for heparin and a stabilizer;
- (b) spray coating the additive formulation to the inner wall of a blood collection tube;

- (c) drying the applied formulation by applying an airjet or forced air to the innerwall of the coated tube at about 25 to about 30°C and from about 5 to about 10 minutes;
- (d) vacuum drying the inner wall of the tube for about 2 hours;
- (e) removing the oxygen from the inner wall of the tube by back flushing the tube with a gaseous mixture of CO<sub>2</sub> and H<sub>2</sub>;
- (f) stoppering the tube;
- (g) irradiating the tubes within 2 to 5 hours of stoppering at about 1.5 Mrads;
- (h) adding a blood sample containing heparin into the tube;
- (i) mixing the specimen in the tube with the additive formulation by about 5 to about 10 manual inversions; and
- (j) allowing the specimen to clot.

20. A method for preparing an additive formulation comprising the steps of:

- (a) measuring the activity of heparinase;
- (b) mixing heparinase with 150 mm sodium phosphate to adjust the activity of heparinase from about 50 to about 80 IU/mL;
- (c) adding about 8 to about 12% trehalose with the mixture; and
- (d) filtering the mixture through a 0.22 µm filter.

21. A tube for preparing a heparin specimen for clotting comprising a top end, a bottom end, a sidewall extending from said top end to said bottom end and including an exterior and interior surface, a spray coated additive formulation comprising a mixture of a buffer, heparinase, and trehalose on said interior surface of said tube.

22. The tube of Claim 21 is made from glass or plastic.

23. A method for making a tube for handling a heparin specimen for clotting comprising the steps of:

- (a) providing a container having an open end, a closed end, a sidewall extending between said open end and said closed end and having an inner wall surface and an outer wall surface;

- (b) preparing an additive formulation comprising a mixture of sodium phosphate, heparinase, and trehalose;
- (c) dispensing said formulation to the inner wall surface of said tube in a fine mist;
- (d) drying said formulation by applying forced air for a sufficient period of time to dry the formulation whereby a dry formulation remains;
- (e) vacuum drying the inner wall of the tube for about 2 hours at about 35°C at about 600 millimeters Hg;
- (f) removing oxygen from the tube by back flushing with a gaseous mixture of CO<sub>2</sub>/H<sub>2</sub> at a mixture of about 80:20;
- (g) stoppering the tube; and
- (h) irradiating said tube and formulation by gamma irradiation.

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